FiberCom 10/100BaseT to 100BaseFX Bridging Media Converter
User's Manual

1. Overview

Electro Industries' FiberCom 10/100BaseT to 100BaseFX Bridging Media Converter (part # EI-FP-8110SA-25) provides 10/100Mbps communication between Cat 5 twisted pair Ethernet cables and Fiber Optic cables. The FiberCom protects your copper-wire investment, while extending the range of your communication capability and preparing your network for future optimization.
FiberCom features include:

- Support for half-duplex and full-duplex transmission.
- Ability to extend range of communication from 1000 meters maximum (with twisted pair alone) to 80 kilometers.
- Built-in switching core to implement flow control and reduce broadcast packets.
- Support for the transmission of extra long packets (1600 bytes) over VLAN.
- Built-in 128kB RAM for data buffering.
- Support for auto MDI-MDIX function for seamless device connection.
- Support for link pass-through function (LPF) for fault detection.
- Ability to interface with multiple types of Fiber ports, i.e., dual-fiber multi-mode, dual-fiber single-mode, and single-fiber, single-mode, thereby meeting extended user requirements.
- Fiber optic immunity to electromagnetic interference (EMI) improves data transmission, especially in environments with high EMI, e.g., a manufacturing facility's plant floor.

IMPORTANT! Inspect your FiberCom package to ensure it contains the following items:

1. FiberCom Media Converter
2. External Power Supply

2. Specifications

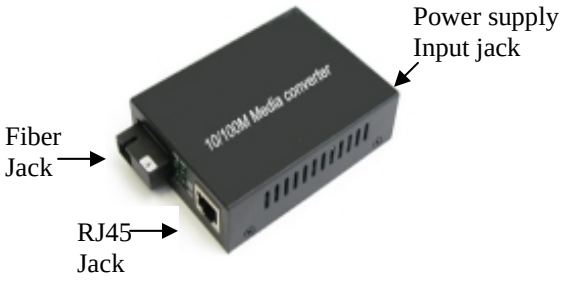
Parameters	Specifications
Access mode	10/100 Mbps Gigabit Ethernet
Standards	IEEE802.3 10BaseT Ethernet, IEEE802.3U 100BaseTX/FX Fast Ethernet, IEEE802.1Q VLAN, IEEE802.1p CoS, IEEE802.1D Spanning Tree MAC Bridges
Wavelength	850nm/1310nm/1550nm
Transmission distance	Dual-fiber multi-mode: 721'/220m (fiber size: 62.5/125μm) / 1804'/550m (fiber size: 50/125μm) Dual-fiber single-mode: (32.8k to 393.7k)feet/ (10/20/40/60/80/100/120)Km Single-fiber single-mode: (32.8k to 262.5k)feet/ 10/20/40/60/80Km Category-5 twisted pairs: 328'/100m
Port	One RJ45 port: Connected to STP/UTP category-5 twisted pairs One fiber port: dual-fiber multi-mode – SC (fiber size: 50,62.5/125μm) Dual-fiber single-mode – SC/FC fiber port (fiber size: 9/125μm) Single-fiber single-mode – SC/FC fiber port (fiber size: 9/125μm)
Conversion mode	Medium conversion
Delay	<10μs
Bit error rate	<1/1000000000
MTBF	100,000 hours
LED	POWER (power), FX LINK (fiber link action), TP LINK100 (twisted pair connection 100M), TP ACT (twisted pair packet forwarding action)

Power	90-265VAC Input using external power supply/ 5VDC Input jack
Power consumption	5W
Operating temperature	(50 to 131)°F/(10 to 55)°C
Operating humidity	5%~90%
Storage temperature	(-40 to 158)°F/(-40 to 70)°C
Storage humidity	5%~90% (non-condensing)
Dimensions	1.02”/26mm(H)*2.75”/70mm(W)*3.69”/94mm(L) (height * width * length)

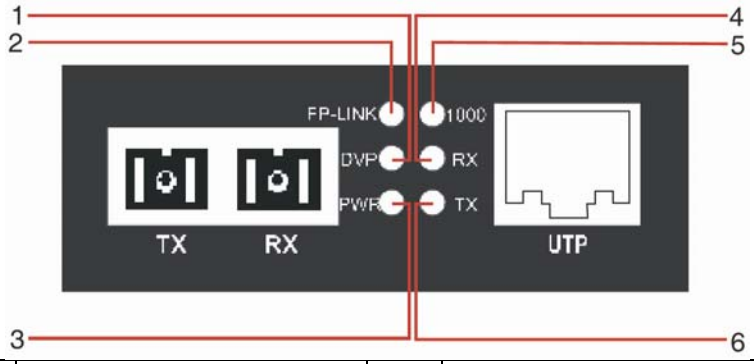
3. Connection

Connect the FiberCom Media Converter as follows:

a. Connect the network device (work station, hub or switch) with RJ45 interface to the RJ45 jack of the FiberCom through twisted-pair.
b. Connect the multi/single mode fiber to the SC/ST Fiber interface of the FiberCom.
c. Plug the supplied Power supply into the FiberCom.
d. Once the devices are powered on, the FiberCom LEDs indicate connection status. See next section.



4. Front Panel Indicators



Number	LED	Function	Status	Meaning
1	DUP	UTP port duplex LED	ON	Full-duplex
			OFF	Half-duplex
2	FP-LINK	Fiber port link/action status LED	ON	Fiber link is ACTIVE
			OFF	Fiber link is INACTIVE
3	PWR	Power LED	ON	Power is ON
			OFF	Power is OFF
4	RX	UTP port link/action status LED	ON	Data is being received
			Blink	Data has been transmitted (not currently transmitting)
			OFF	Data is not being sent out
5	100	UTP port speed LED	ON	100M speed
			OFF	10M speed
6	TX	UTP port link/action status LED	ON	Fiber link is OK
			Blink	Data is being received or transmitted
			OFF	Fiber link has failed

5. Troubleshooting

If the FiberCom Media Converter fails to operate, follow these steps:

1. Is the FiberCom's Power LED illuminated? (See page 10)	No: - Is the power supply compatible with the AC outlet? - Is the power supply installed properly in the FiberCom and the AC outlet? - Contact EIG's technical support.
	Yes: continue to step 2.
2. Is the "Duplex/Link"LED illuminated on a port with twisted-pair cable installed?	No: check the copper cables to insure proper connection.
	Yes: - Amber light means the FiberCom has selected half-duplex mode. - Green light means the FiberCom has selected full-duplex mode. If the mode is not correct, disconnect and reconnect the twisted pair cable to restart the initialization process. Continue to step 3.
3. Is the "LACT" LED illuminated on the on the fiber cable port?	No: - Check the fiber cables for proper connection. - Verify that the TX and RX cables are connected to the FiberCom's RX and TX ports, respectively.
	Yes: continue to step 4.
4. Is the "Speed" LED illuminated on a port with twisted-pair cable installed?	No: check the copper cables for proper connection.
	Yes: - Amber light means the FiberCom has selected 10Mbps operation. - Green light means the FiberCom has selected 100Mbps operation. If the speed is not correct, disconnect and reconnect the twisted pair cable to restart the initialization process.

FCC RFI Statement

Federal Communications Commission (FCC) Radio Frequency Interference

This device complies with part 15 of FCC regulations.

Electro Industries/GaugeTech

"The Leader in Power Monitoring and Control"

1800 Shames Drive

Westbury, NY 11590

(Tel) 516-334-0870

(FAX) 516-338-4741

www.electroind.com

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